

AMENDMENT AND RESPONSE

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Serial No.: 10/673,739

Filing Date: September 29, 2003

Attorney Docket No. 100.147US02

Title: MECHANICAL HOUSING

REMARKS

Applicant has reviewed the Office Action mailed on July 5, 2005. Claims 1, 4, 9, and 11-14 have been amended. Claim 2 has been cancelled. As a result, claims 1 and 3-14 are pending in this application.

Information Disclosure Statement

Applicant respectfully requests that copies of the 1449 forms, listing all references that were submitted with the Information Disclosure Statement filed on September 29, 2003 and the Supplemental Information Disclosure Statement filed on June 16, 2005, marked as being considered and initialed by the Examiner, be returned with the next official communication.

Claim Objections

Claims 1, 2 and 9 were objected to because of the following informalities: In claim 1, line 13; in claim 2, line 1 and in claim 9, line 13 the word "though" should be changed to the word "through." Applicant respectfully asserts that Claims 1 and 9 have been corrected to overcome the objection. As stated earlier, Claim 2 has been cancelled, thereby rendering the objection to this claim moot.

Rejections Under 35 U.S.C. § 112

Claims 1-14 were rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 4, 9 and 11 have been amended to overcome the rejection(s) under 35 USC § 112, 1st paragraph, as set forth in the Office Action. Claims 12-14 have been amended to correct typographical errors. No new subject matter has been introduced. As a result, Applicant respectfully traverses this rejection.

Claim 1, as amended, is directed to an apparatus for containing and cooling objects comprising a cage formed of a material having a first thermal property. The cage includes at

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least one first aperture, at least one second aperture exposing at least a portion of a case and different than the first aperture, at least one heat sink thermally coupled to the case through the at least one second aperture, and at least one cover for sealing the at least one first aperture. The case is formed of a material having a second, different thermal property, is partially within the cage, and is accessible to objects through the at least one first aperture. One or more of the objects thermally coupled to the case will transfer heat to the case, through the second aperture, to the heat sink. The at least one heat sink protrudes through the at least one second aperture to thermally couple to the case.

The Applicant directs the Examiner to the following paragraphs:

- Paragraph [0053] which states, in part, that the "Case 106 has several partitions that divide the region within case 106 into a several sections, as exemplified by partition 122 and section 124 in Fig. 2. Case 106 also includes partition 126, shown in Fig. 4, that divides the partitioned region within case 106 into two partitioned regions. Walls 118, walls 120, each partition 122, and partition 126 can be of any material having suitable thermal and strength properties, such as aluminum, copper, etc."
- Paragraph [0059] which states that "At least one heat sink 108 is thermally coupled to case 106, but two heat sinks 108 can be thermally coupled to opposing frame-walls, e.g., to walls 120, as demonstrated in Fig. 2. Alternatively, at least one heat sink can be thermally coupled to each of the walls 118 and each of the walls 120. Heat sink 108 is a solid block of material having thermal properties suitable for heat sinks, such as aluminum, copper, brass, bronze, or the like."
- Paragraph [0084] which states, in part, that the "Shell 304 and covers 306 can be made of any material having a suitable combination of thermal properties, corrosion resistance, and strength, for example a formulation of aluminum, bronze, and nickel, nylon, ABS, or the like."
- Paragraph [0088] which states, in part, that "The third embodiment includes at least one case 324, shown in Fig. 11. In one embodiment, case 324 is structurally and functionally equivalent to case 106 of the first embodiment. In one embodiment, case 324 is of the same material as case 106, or a suitable equivalent."

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The limitation of claim 1 including "a cage formed of a material having a first thermal property" is supported by paragraph [0084]. The limitation of claim 1 including "the case is formed of a material having a second, different thermal property" is supported by paragraphs [0053], [0059], and [0088]. From the material identified in the present application, Applicant respectfully contends that one of ordinary skill in the art would know that a cage formed of nylon, ABS, or the like will have a different thermal property than a case formed of aluminum, copper, brass, bronze, or the like.

Claim 9, as amended, is directed to an apparatus for containing and cooling objects comprising a cage formed of a material having a first thermal conductivity property. The cage includes at least one first aperture, at least one second aperture exposing at least a portion of a case and different than the first aperture, at least one heat sink thermally coupled to the case through the at least one second aperture, and at least one cover for sealing the at least one first aperture. The case is formed of a material having a second, higher thermal conductivity property, is partially within the cage, and is accessible to objects through the at least one first aperture. One or more of the objects thermally coupled to the case will transfer heat to the case, through the second aperture, to the heat sink. The at least one heat sink protrudes through the at least one second aperture to thermally couple to the case.

Applicant refers the Examiner to the arguments presented above with respect to claim 1. Further, Applicant respectfully contends that the limitation of claim 9 including "a cage formed of a material having a first thermal conductivity property" is supported by paragraph [0084]. The limitation of claim 9 including "the case is formed of a material having a second, higher thermal conductivity property" is supported by paragraphs [0053], [0059], and [0088]. From the material identified in the present application, Applicant respectfully contends that one of ordinary skill in the art would know that a case formed of aluminum, copper, brass, bronze, or the like will have a higher thermal conductivity property than a cage formed of nylon, ABS, or the like.

As a result, Applicant requests that the rejections under 35 USC §112 be withdrawn and claims 1 and 3-14 be allowed.

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Claims 1 and 9 have been amended to correct the typographical errors with respect to the case protruding through the shell versus the heat sink 320 that protrudes through the shell. As a result, Applicant requests that the Examiner withdraw this rejection.

Claims 4 and 11 have been amended to remove any reference to "structural foam" as indicated by the Examiner on page 3 of the Office Action. As a result, Applicant requests that the Examiner withdraw this rejection.

Allowable Subject Matter

Claims 1 and 9 were indicated to be allowable if rewritten or amended to overcome the rejection under 35 USC § 112 set forth in the Office Action. In view of the arguments presented above regarding this rejection, Applicant respectfully contends that claims 1 and 9 are allowable in their current form.

Claims 2-7 and 10-14 were indicated to be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, 1st paragraph, and to include all of the limitations of the base claim and any intervening claims. Claim 2 has been cancelled. In view of the arguments presented above regarding this rejection, Applicant respectfully contends that claims 3-7 and 10-14 are allowable in their current form.

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CONCLUSION

Applicant respectfully submits that claims 1 and 3-14 are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 332-4720.

Respectfully submitted,

Date: January 23, 2006



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